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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,063	12/04/2001	Masayuki Iwasaki	Q67090	9502

7590 06/20/2003

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2100 Pennsylvania Avenue, NW
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EXAMINER

HESS, BRUCE H

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 06/20/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,063

Applicant(s)

Iwasaki et al.

Examiner

Bruce Hess

Group Art Unit

1774

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 12-4-01 (IDS)
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-17 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-17 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

1. Claims 2, 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for reasons set forth below:

- (a) In claim ¹⁸2, the "protective layer" comprises multiple layers [i.e., (A) and (B)]. Since the term layer is singular, it is suggested that the plural "protective layers" be recited;
- b. Is the "denatured polyvinyl alcohol" of claim 4 the same as or different from the denatured polyvinyl alcohol of claim 1? and
- c. There is no antecedent basis for layer (A).
- ~~X~~ Claims 1, 3, 4, 6, 8, 9, 11 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by the patent to Mando et al (JP 11-314457).
3. Claims 1-4, 6, 8-11 and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by the patents to Fukuchi et al (USP 6,410,478).
- ~~X~~ Claims 5, 7, 12, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mando et al.
5. Claims 5, 7, 12, 13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuchi et al.

These patents teach thermal recording material which can have a protective layer containing either an amide-denatured polyvinyl alcohol (see Fukuchi et al, column 3, line 62; column 4, lines 55, 56 and 60; column 5, lines 19, 20, 26 and 27; column 6, lines 29-31; and column 10, line 65) or a diacetone-denatured polyvinyl alcohol (see Mando et al. at page 2, par. 0017, lines 2 and 3 and page 3, par. 0027, line 3). Both

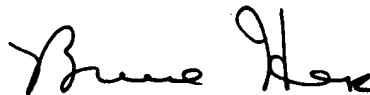
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patents additionally teach a surfactant, a water-soluble polymer and a cross-linking agent in the protective layer. Fukuchi et al also teach the use of two protective layers.

The experimental modification of this prior art in order to ascertain optimum-operating conditions (e.g., determine layer thickness, compositional proportions and particle sizes) fails to render applicants' claims patentable in the absence of unexpected results. Finally, it is noted that in the absence of unexpected results, use of the position isomer (e.g., 2, 4¹-dihydroxy diphenylsulfone as opposed to 4, 4¹-dihydroxy diphenylonlfone) of a compound for the same purpose would have been an obvious expedient to one of ordinary skill in the art.

Any inquiry concerning this communication should be directed to Bruce Hess at telephone number (703) 308-2402.

B. Hess/dh
May 30, 2003



BRUCE H. HESS
PRIMARY EXAMINER